

*C. perversum* are likewise larger in the Mediterranean than in our seas. *Triton nodosum* attains greater size at Malaga than at Vigo or further north, but is smallest in the Azores. *Aclis supranitida* grows larger at Madeira than in Britain.

The southern forms of Mollusca appear to follow the same rule as the more northern. *Murex brandaris*, *Cypræa lurida*, and *C. spurca*, not recorded to have been found north of the Mediterranean, attain larger dimensions in the Canary Islands than in that sea.

There are a few species the larger growth of which appears to be influenced by western longitude or Atlantic exposure. It has been remarked that *Tellina balaustina* is found larger in the Hebrides and on the west of Ireland than in the Mediterranean, where it is much more frequent. I have obtained it at Gibraltar of intermediate size; and a valve dredged off Cape Finisterre in Spain was of the same size as the Scottish and Irish specimens. *Lucina spinifera* is found larger in the Hebrides and west of Ireland than elsewhere; upon the coast of North Drontheim it is quite as small as upon that of Spain. *Solen siliqua*, *Lutraria elliptica*, and some other species, are found of extraordinary dimensions in the outer Hebrides; several others attain larger growth in Bantry Bay than on any part of the English coast.

From the examples I have stated (and there would be no difficulty in adducing more of a similar character) I think we may fairly come to the conclusion, that, although there are exceptions in both directions, and although the size attained by Mollusca may be influenced by various conditions in different localities, as a general rule, each species attains its greatest size, as well as greatest number, in the latitude best suited to its general development; and that, whether a species be Arctic, Boreal, Celtic, or Lusitanian, it will grow largest in the region to which it belongs.

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## XII.—On some new *Longicornia* from the *Moluccas*.

By FRANCIS P. PASCOE, F.L.S. &c.

IN Mr. Wallace's last collection from Batchian, in the Moluccas, there are about one hundred and fifty *Longicorns*, mostly new to science, but referable (with two or three exceptions) to genera which appear to be more or less frequent in the Indian Islands. The new forms, one of which resembles the South American genus *Onychocerus* in habit, and of which a second species is found in New Guinea (Aru), are confined to Mr. Wallace's private collection, and therefore, unfortunately, cannot now be described; but amongst the others there are a few species which are interesting either as indicating a more extended range of the

genera (as in *Glaucytes*, *Agnia*, and *Cylindropomus*), or as additional members in very limited and remarkable groups, as *Eurycephalus* and *Trihammatus*.

#### EURYCEPHALUS.

Laporte, An. Art. ii. p. 430.

##### *Eurycephalus variabilis*.

*E. ater*; elytris rugosis, basi plus minusve sanguineis.

Deep black, the upper surface covered with very short erect hairs; head rather broad, thickly punctured; ridge over the insertion of the antennæ, parts about the mouth, and mandibles, except at the apex, blood-red; prothorax coarsely and very thickly punctured, with a short central keel, and a strong tooth on each side, placed behind the middle; clytra irregular, as if roughly punctured, apparently caused by the inequality of the pubescence, the base or base and sides more or less of a blood-red colour; body beneath dull black. Length 10 lines.

Of fifteen specimens examined, no two were quite alike in colour; one was entirely black, and another had rather more than half the elytra red; these were the extremes of the set; and amongst the whole, three had the legs pale red.

#### GLAUCYTES.

Thomson, Archives Entomologiques, i. p. 423. *Leptocera*, Serville, non Schönherr.

##### *Glaucytes scitulus*.

*G. niger*; prothorace impunctato capiteque griseo-pubescentibus, sericeis; elytris chalybeatis, biapiculatis, maculis quatuor argenteo-albis; femoribus basi testaceis.

Black; head, prothorax, body beneath, and legs covered with a thin, silky, pale greyish pubescence; elytra biapiculate, irregularly punctured, smooth, each with four spots formed of short white hairs, the first before the middle, the second obliquely transverse behind it, then a small round spot, and lastly an oblong one at the apex; prothorax impunctate, rounded at the side; antennæ rather longer than the body, reddish brown; femora at the base testaceous. Length 5 lines.

#### AGNIA.

Newman, Entomol. p. 291.

##### *Agnia eximia*.

*A. nigra, nitida*; capite elytrisque albo-maculatis; prothorace postice

albo-marginato: infra subnitida, marginibus segmentorum abdominis albis.

Deep glossy black; line below the eye, another behind, and one on the vertex, posterior border of the prothorax, scutellum, and several transverse spots on the elytra, pure white (formed by dense patches of short hairs); body beneath and legs black, less glossy than on the upper surface, sparingly covered with a delicate ashy pubescence; margins of the abdominal segments white. Length 10 lines.

This handsome insect is nearly allied to the Philippine *Agnia clara*. *Agnia* differs from *Cereopsius*, principally, in its unarmed prothorax.

#### TRIHAMMATUS.

Chevrolat, Rev. et Mag. de Zool. No. 2. 1857.

#### *Trihammatus tristis*.

*T. niger*, nitidus, subtiliter griseo-pubescent; prothoracis margine antico et vitta suboculari, lateribusque pectoris infra albis; elytris maculis quatuor atris.

Glossy black, covered with a short, dense, greyish pubescence, giving the upper surface a dull leaden hue; head sulcated in front, an oblique yellowish white band beneath the eye, which is continued along the sides of the thorax beneath; prothorax strongly spined on the side, the anterior margin narrowly bordered with yellowish white; scutellum triangular, truncated posteriorly; elytra thickly and irregularly punctured, with several small shining tubercles at the base, and two opaque deep-black irregular spots on each (one before, the other behind the middle); antennæ (♂) twice as long as the body. Length 12 lines.

The females of this genus (which have not been hitherto described) differ essentially from the males in the *fourth* joint of the antennæ, only, being enlarged; and this enlargement assumes a cylindrical form, not rounded or pear-shaped, as in the other sex.

#### CYLINDROPOMUS.

Blanchard, Voyage au Pôle Sud, iv. p. 268.

#### *Cylindropomus grammicus*.

*C. niger*; prothorace utrinque vittis duabus albis; elytris fuscenscens, lineis duabus longitudinalibus, antice posticeque conjunctis, albis.

Dull black; head broader than the prothorax, impunctate, minutely pubescent, a raised line on the vertex and an oblong  
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white spot behind the eye; prothorax slightly corrugated in the centre, a broad yellowish-white line on each side and a narrower one beneath; scutellum transverse, black; elytra acuminate, finely punctured, pale brown, with two longitudinal whitish lines on each, united at the shoulder and apex; antennæ and legs pitchy, the former nearly three times the length of the body, the femora reddish at the base; body beneath with a greyish pile. Length 7 lines.

*Cylindropomus* should, I think, be placed in the Lamiidæ, near *Olenocamptus*, from which, indeed, it scarcely differs. A series of this species shows a very considerable amount of variation in the width of the head: in some it is scarcely wider than the prothorax, and from these it runs up to nearly twice the width.

XIII.—*On the Markings of the Diatomaceæ in common use as Test-objects.* By G. C. WALLICH, M.D.

THE markings on the valves of certain species of Diatoms have long been prized as tests of the defining and amplifying powers of microscopic lenses. Up to a very recent period they answered every purpose; but the rapid advances achieved of late by our leading opticians in the construction of objectives furnish us with many instances in which the formerly received interpretation of minute organic structure has turned out to be fallacious. These tests have thus been somewhat unduly valued, and, as a natural consequence, many indifferent objectives have been thrust on the public, the efficiency of which depended, not on accuracy of construction, but on the variable nature of the tests they were subjected to.

Accuracy of measurement is of the first importance in all microscopic investigations, whether we desire to measure the striæ on a Diatom, the thickness of a cell-wall, a blood-disk, or any of the numberless objects the microscope reveals to us; and until this perfect accuracy is ensured, it is almost needless to say that a vast amount of time and patient labour will be expended in vain.

As an example in point, we need only take the value of *Pleurosiyma fasciola*, a Diatom which was considered, until a very late date, as one of the severest tests for a first-rate  $\frac{1}{3}$  or  $\frac{1}{1\frac{1}{2}}$  objective. It is true that *P. fasciola*, under certain restrictions, may be made an admirable test; but it is one adapted with equal propriety to test either a  $\frac{1}{2}$  or a  $\frac{1}{1\frac{1}{2}}$  objective. This is due to the widely varying character of its lineation,—a fact of which the less scrupulous class of opticians were not slow to avail